

H. DE L. MÖISE.
 FLUSH TANK ELBOW.
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1,037,165.

Patented Aug. 27, 1912.

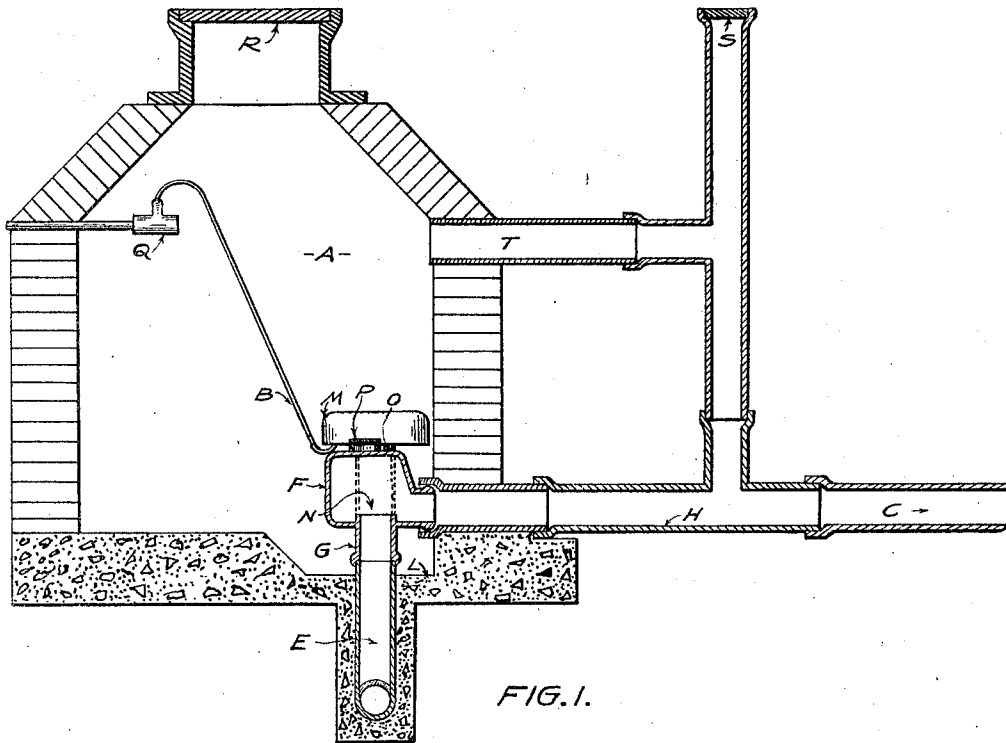


FIG. 1.

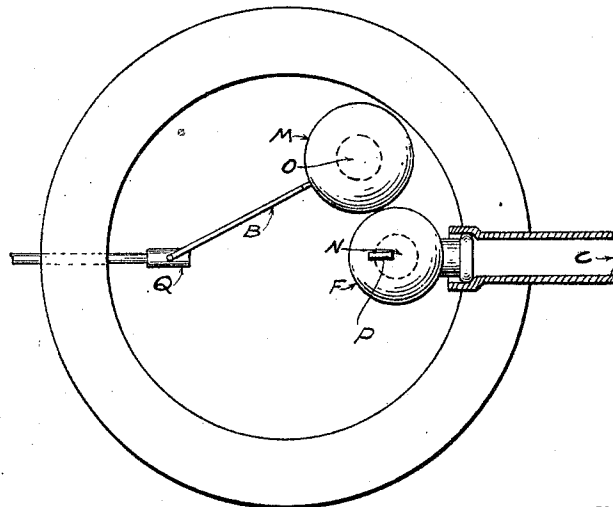


FIG. 2.

WITNESSES:
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FLUSH-TANK ELBOW.

1,037,165.

Specification of Letters Patent. Patented Aug. 27, 1912.

Application filed December 5, 1910. Serial No. 595,568.

To all whom it may concern:

Be it known that I, HARMON DE LEON MÖISE, a citizen of the United States, residing at Sumter, in the county of Sumter and State of South Carolina, have invented certain new and useful Improvements in Flush-Tank Elbows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference named thereon, which form a part of this application.

My invention relates to improvements in flushing apparatus such as commonly used in connection with sewer systems, said tank being provided with a siphon for the purpose of discharging a quantity of water intermittently from the tank into the sewer for cleansing same, and consists of means for easily removing all the apparatus normally positioned in the tank in a line with the sewer, and also the upward projecting end of the discharge leg of the siphon so as to permit of easily cleaning or inspecting the sewer.

Figure 1 is a view in elevation, partly in section, of a flush-tank embodying my invention. Fig. 2 is a top view, with the siphon arranged at a slightly different angle from that shown in Fig. 1.

The same letters of reference denote the same parts wherever they are shown.

A, denotes a tank of the usual construction provided with the manhole R, the lamp-hole S and the vent T. Placed in the tank in any suitable position is a bell M supported over the intaking limb O of the usual U shaped siphon. This siphon extends downwardly from within the bell and returns upwardly, the short leg E joining the removable elbow member F at G. This downwardly projecting portion or neck G extends below the invert H of the sewer C. Above G is the upwardly projecting lip N within the elbow member F. The removable member F carrying with it the parts G and N may be rotatably mounted upon the short leg of the siphon E and is provided with a collar designed to cause the short leg of the siphon E to register with G and N, these parts constituting the top of the short leg of the siphon and being in alinement therewith. The purpose of mounting the

removable elbow F rotatably upon the short leg of the siphon is to enable any adjustment necessary to compensate for inaccuracy in setting.

Water-tight connections are provided between the piece F, the short leg of the siphon E, and the sewer, by surrounding the joints with a collar of cement or the like. When it is necessary to inspect or cleanse the sewer these connections can be readily removed and the piece F lifted aside by the handle P. Thus unobstructed access from the tank may be had to the sewer. Heretofore, no means has been available for this purpose, which left an unobstructed space in line of the sewer from within the tank, of the full measure of the interior diameter of the sewer.

In order to prevent the long leg O and bell M of the siphon from obstructing access to the sewer, the siphon is positioned at an angle with the line of the sewer, so that a line passing through the center of the sewer would bisect at right angles or thereabout, a line passing through the center of the two legs of the siphon. A right angle need not be exactly preserved, but this may be variable to any extent not inconsistent with preserving the space within the tank unobstructed in line with the sewer through the tank. Fig. 2 shows one suitable arrangement, with the legs of the siphon slightly out of the right angle line. The bottom of the tank L will be at or below the level of the invert H of the sewer so that nearly all of the tank will be emptied when F is removed.

In operation, when the liquid in the tank reaches a height greater than the column in the outlet side of the siphon formed by the leg C and sections G and N taken together, the siphon is brought into operation, and the liquid in the tank will be discharged into the sewer. If it is desired to inspect the sewer, the liquid supply is now shut off and the removable elbow F displaced. Any liquid now remaining will run off to the level of H. Access is now obtained to the sewer to the full diameter thereof, and root formations or other obstructions which occupy the inside diameter of the sewer, may be freely extracted into the tank, as the opening is wholly unobstructed.

Heretofore, means for inspecting or cleaning a sewer at the flush-tank-end has been afforded by providing a man-hole into which

the liquid from the flush tank discharges into which man-hole the sewer communicates, and by means of this access is provided to the sewer. This additional expense is avoided in my construction. In cases where the man-hole is not used, a removable plug has been provided in the end of the sewer into which the siphon empties, said plug being opposite and in line with the sewer, but in this case the opening left by the plug is necessarily less than that of the sewer proper, and the upper end of the short leg of the siphon which in this case projects considerably above the invert H of the sewer and is immovably so positioned, is in the way, and forms a serious obstacle when extracting obstructions from the sewer.

While any suitable means may be used for admitting liquid to the tank, I prefer to employ an air jet Q to conduct mingled air and water under the bell by means of the pipe B. Here the air and water separate, the water filling the tank, and the air filling the trap formed by the bell M and upper part of the siphon O. The air is in excess quantity, and consequently, the seal is always preserved until the water reaches the

flushing height. This method of supply is fully disclosed in Letters Patent #965,531, granted to me, and is the preferred means of supplying liquid in connection with this improved tank.

Having thus described my invention, I claim:

The combination of a flush tank having an outlet in the bottom thereof, and an outlet for a discharge pipe in the side adjacent to the bottom, a discharge siphon having a limb connected to the first mentioned outlet and its discharge limb arranged to terminate adjacent to the bottom below said outlet for the discharge pipe, and an elbow for connecting said pipe and discharge limb together, said elbow having its siphon connecting portion provided with a neck, so that the removal of the elbow will permit unobstructed access to the discharge pipe.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HARMON DE LEON MOÏSE.

Witnesses:

H. R. VAN DEVENTER,
E. M. HALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."